



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

Ref: CED/TFL/09/1964

Dated: 16-09-2022

Dated of Test: 20-09-2022

To

Resident Engineer
NESPAK
Rehabilitation and Improvement of Saggian Road, Lahore

Subject: **TESTING OF R.C.C. PIPE [ASTM-C76 - 08a]**

Reference to your letter No. 3772/SPR-1/103/MWA/04/63, dated 01.09.2022 on the subject cited above. One R.C.C. Pipes as received by us have been tested. The results are tabulated as under.

Sr. No	Nominal Size	Total Length	Loaded Length	External Diameter	Internal Diameter	Wall Thickness	Proof load	Ultimate Load	Proof Stress	Ultimate Stress
	(inch)	(foot)	(foot)	(inch)	(inch)	(inch)	(kg)	(kg)	Pound/Linear foot/foot	Pound/Linear foot/foot
1	15	7.79	7.30	19.61	14.86	2.37	13000	17000	3171	4147

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Sub Divisional Officer
 Public Health Engg: Sub Division
 Sillanwali
 (Rural Water Supply Scheme Chak No. 116/NB District Sargodha)

Reference # CED/TFL **1965** (Dr. M Rizwan Riaz)
 Reference of the request letter # 174

Dated: 16-09-2022
 Dated: 02-07-2022

Tension Test Report (Page -1/1)

Date of Test 20-09-2022
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (inch)		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.371	3/8	0.373	0.11	0.109	3400	4600	68200	68700	92200	93000	1.00	12.5	
2	0.371	3/8	0.372	0.11	0.109	3500	4600	70200	70840	92200	93100	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
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Pakistan. Ph: 92-42-99029202

To,
 Material Engineer
 Al Jawahir Technical Pakistan Contracting Company LLC
 Project Quality Plan for Construction of New Works for the Year 2022 in Abu Dhabi Palace at
 Rahim Yar Khan, Pakistan
 Reference # CED/TFL 1974 (Dr. M Rizwan Riaz) Dated: 19-09-2022
 Reference of the request letter # Nil Dated: 12-09-2022

Tension Test Report (Page -1/1)

Date of Test 20-09-2022
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (mm)		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.423	10	10.10	0.12	0.124	4000	5000	73487	70970	91858	88800	1.20	15.0	Afco Steel
2	0.431	10	10.20	0.12	0.127	4100	5100	75324	71370	93696	88800	0.80	10.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
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To,
 Project Manager
 Izhar Construction (Pvt) Ltd
 OMBRe' Holdings Pvt Ltd Raiwind, Lahore

Reference # CED/TFL **1976** (Dr. M Rizwan Riaz)
 Reference of the request letter # OMBRe'/Mughal/Steel/009

Dated: 19-09-2022
 Dated: 17-09-2022

Tension Test Report (Page -1/1)

Date of Test 20-09-2022
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (mm)		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.405	10	9.89	0.12	0.119	4000	5000	73487	74100	91858	92700	1.10	13.8	Mughal Steel
2	0.405	10	9.89	0.12	0.119	4100	5100	75324	75870	93696	94400	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
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Pakistan. Ph: 92-42-99029202

To,
 Manager Monitoring Coordination
 Shajar Roads Limited
 Dualization of Sheikhpura - Gujranwala Road

Reference # CED/TFL 1977 (Dr. M Rizwan Riaz)
 Reference of the request letter # MMC/SRL/SGRP/200

Dated: 19-09-2022
 Dated: 18-09-2022

Tension Test Report (Page -1/1)

Date of Test 20-09-2022
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (mm)		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.370	10	9.45	0.12	0.109	3800	4600	69812	77040	84510	93300	1.00	12.5	
2	0.370	10	9.46	0.12	0.109	3800	4700	69812	76920	86347	95200	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
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To,
 Resident Engineer,
 AZ Engineering Associates
 Widening & Improvement of Shahpur Bhera Malikwal Length from Pull Wazidi to Shahpur
 Length 10.00 km (Phase-I from 18.50 to 27.00 km = 8.50 km) in District Sargodha

Reference # CED/TFL **1978** (Dr. M Rizwan Riaz)
 Reference of the request letter# RE/AZEA/SGD/129

Dated: 19-09-2022
 Dated: 31-09-2022

Tension Test Report (Page -1/1)

Date of Test 20-09-2022
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (inch)		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.376	3	0.375	0.11	0.111	3200	4800	64200	63820	96200	95800	0.80	10.0	
2	0.378	3	0.376	0.11	0.111	3500	5200	70200	69480	104200	103300	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Pakistan. Ph: 92-42-99029202

To,
 Assistant Executive Engineer-II,
 CCD, Pak.PWD. Gujranwala
 Renovation / Refurbishment / Up-Gradation of Existing Boundary Wall of Land of NHMP (N-5)
 Beat No/ 10 Mouza Dhillanwali Tehsil District Gujranwala

Reference # CED/TFL **1979** (Dr. M Rizwan Riaz) Dated: 19-09-2022
 Reference of the request letter # AEE-II/CCD/GA/Work/NHMP/B-10/Lab/75 Dated: 13-09-2022

Tension Test Report (Page -1/1)

Date of Test 20-09-2022
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.362	3	0.368	0.11	0.106	2700	4200	54100	55880	84200	87000	1.10	13.8	
2	0.369	3	0.372	0.11	0.109	3000	4600	60200	60930	92200	93500	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

I/C Testing Laboratoires
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To,
 Resident Engineer,
 Orbit Housing
 The Spring Apartment Homes

Reference # CED/TFL **1982** (Engr. Ubaid Ahmed)
 Reference of the request letter# NIL

Dated: 20-09-2022
 Dated: 19-09-2022

Tension Test Report (Page -1/1)

Date of Test 20-09-2022
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (inch)		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.371	3	0.372	0.11	0.109	3500	4700	70200	70820	94200	95100	1.50	18.8	
2	0.375	3	0.375	0.11	0.110	3500	4700	70200	69940	94200	94000	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratories
UET Lahore, Pakistan.

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Department of Civil Engineering
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Pakistan. Ph: 92-42-99029202

To,
 Deputy General Manager Projects
 Habib Rafiq Engineering (Pvt.) Limited
 Construction of Sky Gardens Tower, Lahore

Reference # CED/TFL **1985** (Engr. Ubaid)
 Reference of the request letter # HRLE/SKG/2022/2151

Dated: 20-09-2022
 Dated: 20-09-2022

Tension Test Report (Page -1/1)

Date of Test 02-08-2022
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (mm)		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	4.235	32	31.98	1.25	1.245	30400	50200	53616	53830	88537	88900	1.70	21.3	Afco Steel
2	4.305	32	32.24	1.25	1.265	32000	50800	56438	55740	89595	88500	1.90	23.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
32mm Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Pakistan. Ph: 92-42-99029202

To,
M/S FF Steel
Peshawar

Reference # CED/TFL **1989** (Engr. Ubaid Ahmed)
Reference of the request letter# NIL

Dated: 20-09-2022
Dated: 20-09-2022

Tension Test Report (Page -1/1)

Date of Test 20-09-2022
Gauge length 8 inches
Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (inch)		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	4.213	10	1.256	1.27	1.238	38600	54000	67000	68710	93800	96200	1.60	20.0	
2	4.175	10	1.250	1.27	1.227	35600	52600	61800	63940	91300	94500	1.60	20.0	
3	4.172	10	1.250	1.27	1.226	38000	53400	66000	68300	92700	96000	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile test														
Bend Test														

Witness by Zulafiqar Haider (Material Engineer Shahid & Co. & J&C Enterprises) and M Jamil Alam (Quality Engineer FF Steel)

I/C Testing Laboratories
UET Lahore, Pakistan.

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To,
M/S M Siddique Sons
Lahore
(Siddique Sons Tower Supply)

Reference # CED/TFL **1990** (Dr. M Rizwan Riaz)
Reference of the request letter # SS/Letter # 811

Dated: 20-09-2022
Dated: 19-09-2022

Tension Test Report (Page -1/1)

Date of Test 20-09-2022
Gauge length 2 inches
Description Anchor Bolt Steel Bar Tensile Test

Sr. No.	Diameter / size	Reduced Dia	Reduced Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)	(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(inch)		
1	42	33.40	876.16	44800	48000	502	537	0.70	35.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile test										
-	-	-	-	-	-	-	-	-	-	
Bend Test										

I/C Testing Laboratories
UET Lahore, Pakistan.

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